

### ABSTRACT OF THE DISCLOSURE

A friction force measurement apparatus which measures friction force between a fixed member fixed on a main body of a magnetic tape drive and a magnetic tape abrading the fixed member is characterized by being equipped with a vibration detector which is joined with the fixed member and a vicinity of the fixed member and detects vibration in abrasion of the magnetic tape with the fixed member, and a calculation device which calculates the friction force between the fixed member and the magnetic tape based on a signal from the vibration detector.